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EXAMINER

PATEL, DHAIRYA A

ART UNIT	PAPER NUMBER
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2151

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/918,032

Applicant(s)

TORMASOV ET AL.

Examiner

Dhairya A. Patel

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-50, 52-61 and 63-70 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-50, 52-61 and 63-70 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communication filed on 5/15/2006.
2. This amendment has been carefully considered and entered.
3. Claims 1-25,51,62 are cancelled

Specification

The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and use the invention, i.e., failing to provide an enabling disclosure.

The test to be applied under the written description portion of 35 U.S.C. § 112, first paragraph, is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of later claimed subject matter. Vas-Cat, Inc. v. Mahurkar, 935 F. 2d 1555, 1565, 19 USPQ2d 111, 1118 (Fed. Cir. 1991), reh'rg denied (Fed. Cir. July 8, 1991) and reh'rg, en banc, denied (Fed. Cir. July 29, 1991).

The applicants have failed to provide an enabling disclosure in the detailed description of the embodiment. The specification is objected to under 35 U.S.C. § 112, first paragraph, as failing to support the subject matter set forth in these claims.

As per claims 26,32,57,66,69,70 it states "...each file is stored in the form of plurality of pieces of equal size, the pieces being generated from the file..." In the specification, nowhere does it state that each file is stored in the form of plurality of pieces of equal size, (emphasis added), the pieces being generated from the file. Therefore the specification is objected and appropriate correction is requested.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 26,32,57,66,69,70 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. "...each file is stored in the form of plurality of pieces of equal size, the pieces being generated from the file..." critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

As per claims 26,32,57,66,69,70 it states "...each file is stored in the form of plurality of pieces of equal size, the pieces being generated from the file..." In the specification, nowhere does it state that each file is stored in the form of plurality of pieces of **equal size**, (emphasis added), the pieces being generated from the file.

In the specification it states "To provide fault-tolerance, it is suggested that any file to be stored should be divided into pieces in a way that makes it possible to restore the file from the pieces. The number of pieces can be more than necessary for the restoration of one file. Additionally, the pieces must be functionally equivalent such that it is necessary to collect only an exact number of pieces in order to properly restore the file."

In the specification, it does not state the plurality of pieces are of equal size which is different from "pieces must be functionally equivalent" as stated in the specification. Pieces can be functionally equivalent without being the same/equal size.

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Therefore the newly added subject matter in the claims states "...each file is stored in the form of plurality of pieces of equal size" which is not supported by the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 26,30 are rejected under 35 U.S.C. 102 (e) as being anticipated by Utsunomiya et al. U.S. Patent # 6,101,558 (hereinafter Utsunomiya).

As per claim 26, Utsunomiya teaches a system for distributed file storage comprising:

-a plurality of server (Fig. 1 element 1-6,8) providing, to a plurality of clients (Fig. 1 element 1-4), file access services for accessing files stored on the plurality of servers (column 4 lines 40-65); and

-a list of neighbor servers maintained by each server, wherein the neighbor servers are a subset of the plurality of servers (Fig. 5)(column 6 lines 20-26, lines 42-48),

-wherein each file is stored in the form of a plurality of pieces of equal size, the pieces being generated from the file and stored on the plurality of servers (column 6 lines 20-48) (Fig. 3)(Fig. 4)(Fig.5), and

wherein the list is used to obtain information for reconstructing files stored on the neighbor servers (column 6 lines 20-48).

As per claim 30, Utsunomiya teaches the system of claim 26, wherein at least one of other servers is a logical sever that includes a plurality of physical servers connected via a network (column 4 lines 40-47).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 33,36-45,48-50,52-57,59-61,63-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over by Jennings et al. U.S. Patent # 6,760,763 (hereinafter Jennings in view of Utsunomiya et al. U.S. Patent # 6,101,558 (hereinafter Utsunomiya).

As per claim 33, Jennings teaches a method for distributed file storage comprising:

-dividing a plurality of servers into plurality of groups, with each server belonging to at least one group (column 7 lines 15-34).

The reference teaches dividing servers into plurality of groups and each server belonging to each group.

-on each server, maintaining a list of neighbor servers belonging to the same group (column 8 lines 38-47);

The reference teaches each server is provided with information on corresponding subset of URL's of the servers in the group.

-supporting file access services on each of the servers (column 1 lines 40-57)(column 4 lines 26-41);

-transforming a file into a plurality of pieces of that are derived from the file (column 8 lines 38-47).

-storing each of the pieces on servers selected from the list (column 8 lines 38-47).

The reference teaches storing each URL's on the server selected from the group.

Jennings does not teach transforming a file into plurality of pieces of equal size. Utsunomiya teaches transforming a file into plurality of pieces of equal size (column 6 lines 20-48) (Fig. 3)(Fig. 4)(Fig.5). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Utsunomiya's teaching in Jennings's teaching to come up with transforming a file in plurality of pieces of equal size. The motivation for doing so would be so it would be

easier to store and transfer each piece into packets or frames and each piece would be of equal size so they would behave like functionally equivalent.

As per claim 36, Jennings teaches the method of claim 33, further comprising maintaining functional equivalence among the servers (column 7 lines 24-34)(column 8 lines 38-42).

As per claim 37, Jennings teaches the method of claim 33, further comprising verifying availability of the neighbor servers (column 7 lines 35-53) (column 6 lines 27-41).

As per claim 38, Jennings teaches the method of claim 33, wherein the list is a dynamic list, and further comprising:

- polling the servers on the dynamic list of the neighbor servers and measuring a network distance for each servers (column 7 lines 35-53) (column 6 lines 27-41).

The reference teaches activating in each particular server all files that are included in the group (dynamic list of the neighbor servers) corresponding to the particular server. The reference also teaches measurement of server traffic and establishing a traffic load target for each server (measuring a network distance for each servers)

- keeping each available server on the dynamic list in the same group (column 7 lines 35-53) (column 6 lines 27-41).

The reference activating in each particular servers all files (available servers) that are included in the group of servers (same group).

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-removing unavailable servers from the dynamic list of the same group (column 7 lines 35-53)(column 5 lines 9-16)(column 6 lines 27-41); and

-switching at least one server of the plurality of servers into a neighbor group of servers if the measured network distance is lower than a predetermined threshold (column 5 lines 9-42).

As per claim 39, Jennings teaches the method of claim 38, wherein better network connectivity is determined based on the network distance (column 4 lines 21-39, lines 59-67).

As per claim 40, Jennings teaches the method of claim 38, further comprising:

-polling the dynamic list (column 7 lines 35-53) (column 6 lines 27-41);

-connecting a client to a server on the dynamic list (column 1 lines 40-58)(column 4 lines 26-41);

-switching the client to a different server on the dynamic list that has smaller workload or lower network distance relative to the client (column 1 lines 40-58)(column 4 lines 26-41); and

-delivering to the client a file requested by the client that is stored on the servers (column 4 lines 26-41)(column 1 lines 40-58).

As per claim 41, Jennings teaches the method of claim 38, further comprising:

-polling the dynamic list (column 7 lines 35-53) (column 6 lines 27-41);

-connecting a client to a server on the dynamic list (column 1 lines 40-58)(column 4 lines 26-41);

-switching the client to a different server on the dynamic list that has lower network distance from the perspective of the client (column 1 lines 40-58)(column 4 lines 26-41); and

-delivering to the client a file requested by the client that is stored on the servers(column 1 lines 40-58)(column 4 lines 26-41).

As per claim 42, Jennings teaches the method of claim 33, wherein the list is a static list of servers (column 7 lines 35-53)(column 6 lines 27-41).

As per claim 43, Jennings teaches the method of claim 33, further comprising:

-maintaining multiple lists for a server that belongs to multiple groups (column 7 lines 35-53)(column 5 lines 11-16)(column 6 lines 51-65); and

-upon receiving a request for a file, distributing the request to servers selected from the multiple groups (column 1 lines 40-58) .

As per claim 44, Jennings teaches the method of claim 33, wherein none of the pieces is unique (column 5 lines 32-35).

As per claim 45, Jennings teaches a method of accessing files in a distributed file storage system comprising:

- dividing a plurality of servers into a plurality of groups, wherein each server belongs to at least one group (column 7 lines 15-34);

The reference teaches dividing servers into plurality of groups an each server belonging to each group

-supporting file access services on each of the servers for accessing a file stored on the servers (column 1 lines 40-57)(column 4 lines 26-41);

- at each server, maintaining a list of neighbor servers that belong to the same group (column 8 lines 38-47);

The reference teaches each server is provided with information on corresponding of subset of URL's of the servers in the group.

- generating plurality of pieces from the file (column 8 lines 38-47); and

The reference teaches generating URL's which are part of the file into plurality of pieces of the group.

- distributing the plurality of pieces to the neighbor servers in the same group in order to achieve a desired fault tolerance level (column 5 lines 25-41)(column 6 lines 50-65).

Jennings does not teaches transforming a file into plurality of pieces of equal size. Utsunomiya teaches transforming a file into plurality of pieces of equal size (column 6 lines 20-48) (Fig. 3)(Fig. 4)(Fig.5). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Utsunomiya's teaching in Jennings's teaching to come up with transforming a file in plurality of pieces of equal size. The motivation for doing so would be so it would be easier to store and transfer each piece into packets or frames and each piece would be of equal size so they would behave like functionally equivalent.

As per claim 48, Jennings teaches the method of claim 45, further comprising maintaining functional equivalence of the servers for purposes of storing the file (column 7 lines 24-34)(column 8 lines 38-42).

As per claim 49, Jennings teaches the method of claim 45, further comprising verifying availability of the neighbor servers (column 7 lines 35-53) (column 6 lines 27-41).

As per claim 50, Jennings teaches the method of claim 45, further comprising:
-polling the list of neighboring group servers and measuring a relative network distance for each client-server pair (column 7 lines 35-53)(column 6 lines 27-41)(column 4 lines 32-39).

The reference teaches activating in each particular server all files that are included in the group (dynamic list of the neighbor servers) corresponding to the particular server. The reference also teaches measurement of server traffic and establishing a traffic load target for each server (measuring a network distance for each servers)

-connecting a client to any of the servers on the list using the measured metric (column 1 lines 40-58)(column 4 lines 26-41);

-switching the client to a server on the list that has a lower relative network distance and a smaller workload to improve a level of service (column 5 lines 9-42); and

-delivering to the client the file requested by the client (column 4 lines 26-41)(column 1 lines 40-58).

As per claim 52, Jennings teaches the method of claim 45, further comprising:
-polling servers on the list that belong to the same group (column 7 lines 35-53)(column 6 lines 27-41)(column 4 lines 32-39);

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-connecting a client to any of the servers on the list that belong to the same group (column 1 lines 40-58)(column 4 lines 26-41);

-switching the client to a server on the list that has a smaller workload (column 5 lines 9-42); and

-delivering to the client, the file that is requested by the client (column 4 lines 26-41)(column 1 lines 40-58).

As per claim 53, Jennings teaches the method of claim 52, further comprising:

-identifying a name of the file in namespace (column 6 lines 4-10);

-sending a request for the file from the client to the server to which the client is connected (column 1 lines 40-58)(column 4 lines 26-39);

-sending a request for the file from the server to which the client is connected to a neighbor server (column 1 lines 40-58)(column 4 lines 26-39);

-distributing the request to the other servers if the server to which the client is connected cannot provide the file pieces information (column 1 lines 40-58);

-checking for file pieces in local cache of each server that received the request (column 6 lines 27-41);

-sending the pieces to the server to which the client is connected (column 6 lines 27-41)(column 1 lines 40-58);

-transferring the pieces to the client (column 1 lines 40-58); and

-assembling the file on the client (column 1 lines 40-58).

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As per claim 54, Jennings teaches the method of claim 52 further comprising sending all the pieces from the neighbor servers to the server to which the client is connected simultaneously (column 6 lines 27-41).

As per claim 55, Jennings teaches the method of claim 45, wherein the list is a static list of servers (column 7 lines 35-53)(column 6 lines 27-41).

As per claim 56, Jennings teaches the method of claim 45, wherein none of the pieces is unique (column 5 lines 32-35).

As per claim 57, Jennings teaches a method of naming files in a distributed storage system comprising:

- dividing a plurality of servers into a plurality of groups such that each server belongs to at least one group (column 7 lines 35-53)(column 6 lines 27-41)(column 4 lines 32-39);

- supporting file access services on each of the servers for accessing files stored on the servers (column 1 lines 40-57)(column 4 lines 26-41);

- giving file names for the files uniformly and independent of location of the files on the servers (column 6 lines 4-10, lines 35-41);

- storing the files on the servers using the names (column 6 lines 4-10, lines 35-41); and

- accessing the files using the file access services from any of servers (column 1 lines 44-58)(column 4 lines 26-41).

Jennings does not teaches transforming a file into plurality of pieces of equal size. Utsunomiya teaches transforming a file into plurality of pieces of equal size

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(column 6 lines 20-48) (Fig. 3)(Fig. 4)(Fig.5). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Utsunomiya's teaching in Jennings's teaching to come up with transforming a file in plurality of pieces of equal size. The motivation for doing so would be so it would be easier to store and transfer each piece into packets or frames and each piece would be of equal size so they would behave like functionally equivalent.

As per claim 59, Jennings teaches the method of claim 57, further comprising maintaining functional equivalence of the servers (column 7 lines 35-53) (column 6 lines 27-41).

As per claim 60, Jennings teaches the method of claim 57, further comprising verifying availability of the neighbor servers (column 7 lines 35-53) (column 6 lines 27-41).

As per claim 61, Jennings teaches the method of claim 57, further comprising:

- on each server, maintaining a dynamic list of the neighbor servers in the same group (column 8 lines 38-47);

The reference teaches each server is provided with information on corresponding of subset of URL's of the servers in the group.

- polling servers on the dynamic list (column 7 lines 35-53) (column 6 lines 27-41);

- connecting a client to any of the servers on the dynamic list (column 1 lines 40-58)(column 4 lines 26-41);

- switching the client to a server on the dynamic list that has lower network distance to improve level of service (column 1 lines 40-58)(column 4 lines 26-41); and

-delivering to the client a file requested by the client that is stored on the servers (column 4 lines 26-41)(column 1 lines 40-58).

As per claim 63, Jennings the method of claim 57, further comprising:

-on each server, maintaining a dynamic list of the neighbor server(column 8 lines 38-47);

The reference teaches each server is provided with information on corresponding of subset of URL's of the servers in the group

-polling servers on the dynamic list that belong to the same group(column 7 lines 35-53) (column 6 lines 27-41);

-connecting a client to any of the servers on the dynamic list (column 1 lines 40-58)(column 4 lines 26-41);

-switching the client to a server on the dynamic list that has a smaller workload (column 1 lines 40-58)(column 4 lines 26-41); and

-delivering to the client a file requested by the client that is stored on the servers (column 1 lines 40-58)(column 4 lines 26-41).

As per claim 64, Jennings teaches the method of claim 57, further comprising:

-maintaining a uniform name space as a tree with a common root and a logical path to each stored file as part of the distributed file storage system (column 6 lines 4-24); and

-maintaining data files and directory files to be stored in the distributed file storage system (column 6 lines 4-41).

As per claim 65, Jennings teaches the method of claim 64, further comprising:

-maintaining the directory files as executable files with their own executable code and data (column 6 lines 4-24); and

-providing translation from a logical path inside the uniform name space to a unique file identifier using the directory files (column 6 lines 4-24).

As per claim 66, Jennings teaches a system for organizing distributed file storage comprising:

-N functionally equivalent servers each providing file access services, for plurality of clients to files stored on the servers, such that when file is divided into N pieces stored on the N servers, any K out of N server can be used to reconstruct the file (column 4 lines 15-40)(column 1 lines 40-58); and

-each file being transformed into the N pieces that are generated from the file and stored on the N servers (column 5 lines 16-40),

-wherein information for reconstructing the files is obtained from the N servers (column 6 lines 10-25).

Jennings does not teach transforming a file into plurality of pieces of equal size. Utsunomiya teaches transforming a file into plurality of pieces of equal size (column 6 lines 20-48) (Fig. 3)(Fig. 4)(Fig.5). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Utsunomiya's teaching in Jennings's teaching to come up with transforming a file in plurality of pieces of equal size. The motivation for doing so would be so it would be easier to store and transfer each piece into packets or frames and each piece would be of equal size so they would behave like functionally equivalent.

As per claim 67, Jennings teaches the system of claim 66, further comprising a dynamic list of neighbor servers maintained by each server,

-wherein the neighbor servers are a subset of the plurality of servers (column 7 lines 15-34)(column 5 lines 17-42), and

-wherein the dynamic list is used to obtain the information for reconstructing the files (column 7 lines 15-34)(column 5 lines 17-42).

As per claim 68, Jennings teaches the system of claim 66, further comprising a static list of neighbor servers maintained by each server,

-wherein the neighbor servers are a subset of the plurality of servers (column 7 lines 15-34)(column 5 lines 17-42), and

-wherein the dynamic list is used to obtain the information for reconstructing the files (column 5 lines 17-42)(column 7 lines 15-34).

As per claim 69, it teaches same limitation as claim 33, therefore rejected under same basis.

As per claim 70, Jennings teaches a method of accessing files in a distributed file storage system comprising:

-dividing a plurality of the servers into dynamically reconfigurable groups, wherein each server belongs to at least one group that is reconfigurable based on minimum network distance (column 7 lines 35-53)(column 6 lines 27-41)(column 4 lines 32-39);;

-supporting file access services on each of the servers for accessing a file distributed among the servers (column 1 lines 40-57)(column 4 lines 26-41);

-generating a plurality of pieces from the file (column 8 lines 38-47); and

The reference teaches generating URL's which are part of the file into plurality of pieces of the group.

-distributing the plurality of pieces to the neighbor servers in the same group in order to achieve a desired fault tolerance level based on how many servers out of the plurality of servers are available (column 5 lines 25-41)(column 6 lines 50-65).

Jennings does not teaches transforming a file into plurality of pieces of equal size. Utsunomiya teaches transforming a file into plurality of pieces of equal size (column 6 lines 20-48) (Fig. 3)(Fig. 4)(Fig.5). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Utsunomiya's teaching in Jennings's teaching to come up with transforming a file in plurality of pieces of equal size. The motivation for doing so would be so it would be easier to store and transfer each piece into packets or frames and each piece would be of equal size so they would behave like functionally equivalent.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsunomiya et al. U.S. Patent # 6,101,558 (hereinafter Utsunomiya) in view of Bell et al. U.S. Patent # 6,052,380 (hereinafter Bell).

As per claim 27, Utsunomiya teaches the system of claim 26, but fails to teach wherein the servers use a peer-to-peer network for communication with each other. Bell teaches the servers use a peer-to-peer network for communication with each other (column 2 lines 43-63). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Bell's teaching in Utsunomiya's teaching to come up with having servers communicate using peer-to-peer network. The motivation for doing so would be because any server can act as either a file server or a client therefore processing request and sending the request.

As per claim 28, Utsunomiya teaches the system of claim 26, but fails to teach wherein the files are stored using a peer-to-peer network. Bell teaches the files are stored using peer-to-peer network (column 2 lines 43-63). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Bell's teaching in Utsunomiya's teaching to come up with storing files using peer-to-peer network. The motivation for doing so would be because any files can be retrieved by any server which can act as either a file server or a client therefore processing request and sending/producing the request.

6. Claims 29,31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsunomiya et al. U.S. Patent # 6,101,558 (hereinafter Utsunomiya) in view of Jennings et al. U.S. Patent # 6,760,763 (hereinafter Jennings).

As per claim 29, Utsunomiya teaches the system of claim 26, but fails to teach wherein the servers are functionally equivalent such that when a file is divided into N pieces stored on N servers, any K out of the N servers can be used to reconstruct the

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file. Jennings teaches the servers are functionally equivalent such that when a file is divided into N pieces stored on N serves, any K out of the N servers can be used to reconstruct the file (column 4 lines 15-40)(column 1 lines 40-58). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Jennings's teaching in Utsunomiya's teaching to come up with having equivalent servers in where files are divided into pieces stored on N servers, and to reconstruct a file use any K out of N servers. The motivation for doing so is because storing multiple copies of files on the multiple N servers so that in case one out of the N servers is not available, other servers can process the request and using any K is to minimize the load/traffic during reconstruction of file.

As per claim 31, Utsunomiya teaches the system of claim 26, but fails to teach wherein each server belongs to a group defined by its corresponding list, wherein a server that belongs to multiple groups maintains corresponding multiple lists for each group to which it belongs and wherein, upon receiving a request for a file, distributing the request to each of the multiple groups. Jennings teaches a server that belongs to multiple groups maintains corresponding multiple lists for each group to which it belongs (column 7 lines 35-53)(column 5 lines 11-16)(column 6 lines 51-65); and wherein, upon receiving a request for a file, distributing the request to each of the multiple groups (column 1 lines 40-58) It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Jennings's teaching in Utsunomiya's teaching to come up with having a server belonging to multiple group and upon receiving a request for a file distributing it to the server. The motivation for doing

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so would be so that since each request is taken care of quickly because since the request is sent to each server and if the one of the server is down or unavailable other server belonging to multiple group take care of the request.

As per claim 32, Utsunomiya teaches the system of claim 26, but fails to teach wherein none of the pieces is unique. Jennings teaches none of the pieces are unique(column 5 lines 32-35). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Jennings teaching in Utsunomiya's teaching to come up with none of the pieces being unique. The motivation for doing so would be so that multiple copies of the files are stored in multiple locations incase one of servers is down or unavailable or one of the servers loses data, there is a backup copy on the other servers.

7. Claims 34-35,46-47,58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Utsunomiya et al. U.S. Patent # 6,101,558 (hereinafter Utsunomiya) in view of Bell et al. U.S. Patent # 6,052,380 (hereinafter Bell).

As per claim 34, Jennings a teaches the method of claim 33, but fails to teach further comprising using a peer-to-peer network for communication between the servers. Bell teaches using a peer-to-peer network for communication between the servers (column 2 lines 43-63). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Bell's teaching in Jennings's teaching to come up with having servers communicate using peer-to-peer network. The motivation for doing so would be because any server can act as either a file server or a client therefore processing request and sending the request.

As per claim 35, Jennings teaches the system of claim 33, but fails to teach further comprising using a peer-to-peer network for storing the file. Bell teaches using a peer-to-peer network for storing the file (column 2 lines 43-63). It would have been obvious to one of ordinary skill in the art at the time of applicant's invention was made to implement Bell's teaching in Jennings's teaching to come up with storing files using peer-to-peer network. The motivation for doing so would be because any files can be retrieved by any server which can act as either a file server or a client therefore processing request and sending/producing the request.

As per claim 46, it teaches same limitation as claim 34, therefore rejected under same basis.

As per claim 47, it teaches same limitation as claim 35, therefore rejected under same basis.

As per claim 58, it teaches same limitation as claim 34, therefore rejected under same basis.

Response to Arguments

Applicant's arguments filed 5/15/2006 have been fully considered but they are not persuasive.

As per remarks applicant stated the following:

As per remark, applicant states Utsunomiya does not teach files are divided in plurality of pieces of equal size. Examiner respectfully disagrees with the applicant because in column 6 lines 20-48, Fig. 3, Fig. 4, Fig.5, Utsunomiya teaches files are

divided in plurality of pieces with as stated in Fig. 3,4,5 which equal size as seen in the offset of the files.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) "Incasting for download files on distributed networks" by Boykin et al. U.S. Patent Publication # 2002/0078461

B). "System and method for determining optimal server in a distributed network for serving content streams" by Lahr et al. U.S. Patent Publication # 2002/0046405

C). "Internet File System" by Rao et al. U.S. Patent # 6,078,929

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

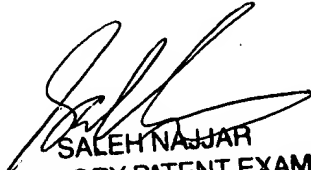
10.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dhairya A. Patel whose telephone number is 571-272-5809. The examiner can normally be reached on 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on 571-272-3939. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DAP



SALEH NAJJAR
SUPERVISORY PATENT EXAMINER